

PRELIMINARY REPORT

EASTERN AREA CRUISE 11

April 20 - May 5, 1967

Prepared by

Robert L. DeLong



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ITINERARY

- April 20: Depart San Diego aboard R/V THOMAS WASHINGTON  
20-26: Pelagic vertebrate survey work between San Diego and Guadalupe Island  
26: Elephant Seal survey on beaches of Northeast Bay Guadalupe Island  
27: Seabird survey and banding on Islote Negro, off Guadalupe Island  
28-29: Pelagic vertebrate survey work between Guadalupe Island and Baja California  
30: Rendezvous with R/V ELLEN B. SCRIPPS in Melpomine Cove, Guadalupe Island; transfer personnel to SCRIPPS for Guadalupe Island work
- May 1: Elephant Seal survey on remaining beaches, east coast Guadalupe Island  
2-3: Fur Seal survey, Guadalupe Island  
4: Conclusion of Fur Seal survey, California Sea Lion survey on Islote Zapato  
5: Arrive San Diego

INTRODUCTION

This marine vertebrate cruise, Expedition MV 67-I of Scripps Institution of Oceanography, was led by Dr. Carl L. Hubbs. Smithsonian Institution is indebted to Dr. Hubbs for the opportunity to participate. Fourteen guest scientists, including Robert DeLong of POBSP, participated in the cruise. Their names and biological pursuits are listed in Appendix I.

PELAGIC OBSERVATIONS

The areas worked by the Washington were primarily deep (1000 fathoms <sup>+</sup>) canyons. The surface layers of these areas are generally regarded as deserts. Birds were not abundant. The northern birds which do occasionally inhabit this cold-water area apparently had returned to the northern breeding grounds. The southern hemisphere birds that are known from the general area had not yet arrived. Also, most of the local seabirds were nesting at this time. This, of course, limits their radius of movement. These factors as well as the environment contribute to the low density of birds in the area.

The California Current pushes masses of cold water down into this area from the north. The activity of the Current is demonstrated by the presence of fresh, drifting Bladder Kelp (Nereocystis and Macrocystis) which occur only north of Point Conception. The kelp, blown loose by storms, was carried south by the California Current.



The pelagic marine vertebrate work primarily involved fish. Fish were caught at depths of over a thousand fathoms by using anchored vertical sets and horizontal free vehicle gear. The free vehicle sets are carried to the bottom by disposable anchors which are connected to the gear by a magnesium link. The magnesium link is milled to such a size that it will oxidize completely in about 12 hours, freeing the fishing gear. The gear is buoyed and upon release from the anchors floats to the surface. Trawls, both deep- and mid-water, were also used in sampling fish populations.

Deep-water fishing was done daily. The very nature of this fishing keeps the ship in the same area for extended periods. Much time was spent waiting for free vehicle gear to surface and searching for it. The search patterns were not charted because of repeated traversing of the same water. Thus, linear mileages were not recorded. Densities have been figured on a temporal basis rather than the usual birds/linear mile. I do not believe these density figures are indicative of actual populations, as continual ship activity in a restricted area, over an extended period of time, probably drives birds from the area. These data should therefore be viewed for their qualitative value, placing restrictions on quantitative interpretations.

Arctic Loon Gavia arctica

14 + 7

Fourteen birds were seen off the Coronado Islands on 5 May. These birds were all flying low over the water in a northwesterly direction. Two flocks contained 13 and 7 birds and one bird was seen flying alone. All were migrating. Dr. Carl L. Hubbs has observed the birds in migration in this area often and states that the birds are always flying northwest. He believes that the birds fly up the coast until they reach the Coronado Islands area, then head northwest, flying on through the Channel Islands and reaching land again at Point Conception where they then fly northward along the coast.

Black-footed Albatross Diomedea nigripes

This species was seen on most days. They were not abundant, and chumming failed to attract any concentrations. We attempted unsuccessfully to catch albatross for banding, using baited hook and line. Since much time was spent on station and trawling at slow speeds, it is likely that fewer albatross were attracted to the ship. Also, since we worked for extended periods in the same general locality some of the birds may have been recorded on different days.

On 29 May Black-footed Albatross were observed feeding on red crabs (Pleuroncodes planiceps). These crabs apparently came to the surface with the scattering layer the night before and remained near the surface until mid-morning.

On 27 April one bird followed the ship briefly. The ship was traveling about one and one-half miles offshore of Guadalupe Island. The bird did not continue to follow when the ship put into Northeast Bay, Guadalupe Island.



Laysan Albatross

Diomedea immutabilis

1

On 24 April at 2217 hours one Laysan Albatross was seen at 29-36 N, 117-26 W. A trawl was being put in the water from the well-lighted fantail of the Washington. The bird made several passes by the fantail but did not stay with the ship when she got underway.

Sooty Shearwater

Puffinus griseus

7

Sooty/Slenderbill Shearwater

Puffinus sp.

5

Small numbers of Sooty Shearwaters were seen 20 through 23 April while working in the deep water (1000 fathoms <sup>±</sup>) northeast of Guadalupe Island. Identifications are believed good as the brilliant white underwings were seen. On 23 April two Sooty Shearwaters were flushed from the surface of the water by the approaching ship. None of the birds seen were thought to be migrating.

Of five birds called Sooty/Slenderbills, one seen on 21 April was probably a Sooty; however, the underwings were not seen. The other four birds were recorded as Slenderbills by Dr. Hubbs at 0523 on 5 May just off the Coronado Islands.

Black-vented Shearwater

Puffinus puffinus opisthomelas 2,521

This Shearwater is now breeding on Islote Negro, a small islet, off the west coast of Guadalupe Island. The birds also breed at this time on Isla Cedros and Isla Natividad which are off Point San Eugenia, Baja California. These islands are located about 170 miles east by southeast of Guadalupe. Thus the area in which we were working was north and between two breeding concentrations. Despite our proximity to the breeding islands, numbers observed at sea were small. However, 2500 of this species were seen on 29 April off the south end of Guadalupe Island. The birds were feeding in a large flock about two miles east of Islote Zapato. A discussion of this flock is included in the account for this species in the accompanying report on Guadalupe Islands.

This subspecies is markedly different from the Newell Shearwater subspecies of Hawaii. The flight pattern is different, but besides this variable characteristic, the coloration of the two birds would never be confused. The upper surface of the Newell is a clear black whereas that of the Black-vented is a brownish-black. The Black-vented also has more dark coloration below the eye and on the neck, lacking the sharp dividing line of black and white found in the Newell. Most distinctive is the dark crissum which gives P. p. opisthomelas its common name.

Pink-footed Shearwater

Puffinus creatopus

1

One bird was identified as being of this species on 21 April. The large size, contrasting dark upper-parts and light lower-parts, and the slow, lazy flight were recorded. It was, however, recorded with a reliability of three, as I am not thoroughly familiar with this species. An additional sighting of a shearwater/petrel on 5 May off the Coronados may have been this



species. The size, flight pattern, and contrasting upper and lower body colors were noted, but the bird was not seen close enough to be sure.

Black Petrel      Loomelania melania      8

Five of the birds were seen at sea on two different days. The remaining were seen on 5 May just off the Coronado Islands where they breed.

Leach Storm Petrel      Oceanodroma leucorhoa      12

Subspecific identification of O. leucorhoa is perplexing if not impossible. There are definitely three subspecies (O. l. beali, chapmani, socorroensis) which breed in the area and are found at sea. There are an additional two subspecies (O. l. willetii and kaedingi) occurring in the area -- the subspecific status of which has not been resolved. The nominate race may also occur here at times.

Five birds were definitely identified as being of this species. All of these had little or no white on the rump. An additional eight birds were seen and recorded only as storm petrel sp. It is probable they are of this species but I am not familiar with the Ashy Petrel (Oceanodroma homochora) which breeds in the Coronados and north and some of the sightings may possibly belong to this species.

Red-billed Tropicbird      Phaethon aethereus      1

The Red-billed Tropicbird was seen on 24 April at 29°30'N, 117°18'W. This bird flew around the ship for some time giving several people a very good look at it. At sunset another tropicbird was seen. The bird was over a mile away but as we were still in the same area it is probable that it was the same bird.

Cormorants sp.      Phalacrocorax sp.

One bird was seen on 5 May off the Coronado Islands.

Glaucous-winged Gull      Larus glaucescens      1

One bird was seen on 20 April at approximately 31°50'N, 117°49'W.

Western Gull      Larus occidentalis      441

Western Gulls were seen most days while at sea. All birds present in the area at this time appear to belong to L. o. wymani.

Sabine Gull      Xema sabini      22

This small arctic breeder was in migration through the area during the entire period of the survey. All birds seen were flying in a northerly direction and low to the water. One exception was a group of five birds which flew to several hundred feet above the water and swirled for several minutes. These birds then returned to just above the surface and continued north.



While off the east coast of Guadalupe Island, on 26 April, we encountered a flock of 11 birds flying north and paralleling the island about two miles off shore.

Pomarine Jaeger      Stercorarius pomarinus

4

The Jaegers were seen on two successive days. All were light-phase adult birds with twisted central retrices. Two of these birds were attracted to fish that we caught on the free vehicle gear and floating on the surface. They were not observed to feed.

Sterna sp.

3

One bird was seen on 22 May at 30°56'n, 117°12'W, and two others on 24 May at 29°38', 117°26' (sightings 50 miles and 85 miles off Baja, respectively). The birds were not well observed, but were small with gray backs and were probably either Forster or Common Terns.

Red Phalarope      Phalaropus fulicarius

338

The birds were seen during both parts of the trip. However, the birds seen during the Washington cruise were apparently not in migration. Many of these birds were still in winter plumage, some were molting, and a few were in nuptial plumage. But by 28 April the birds had begun moving north and greater proportions of these birds were in molting or in the real breeding plumage. Apparently the birds molt the body feathers in migration. All birds handled in Bering Sea in May and June last year had completed the molt. But the question arises, do the birds ever reach the breeding grounds with the molt still in progress?

As was noted by Harrington who was working off central California from 18 to 25 April, 1967, the distribution of Red Phalaropes is local. This also seems to be true of the birds in migration. We encountered fronts or waves of birds moving north in flocks of 3 to 25 birds. An example: on 4 May north of Guadalupe Island in a 13-minute period, six flocks totaling 73 birds were seen. It was then 47 minutes before another group was encountered.

Xantus Murrelet      Endomychura hypoleuca

6

The small number of alcids recorded probably does not reflect actual densities, as the birds sit on the water and spend much time feeding under water. The birds are seen only when flushed by the approaching ship. Also, the birds were breeding on Guadalupe Island at this time and may not wander far from the island to feed. This is true of alcids breeding on St. George Island, Bering Sea. Here there will be concentrations of millions of alcids feeding along tide rips within five miles of the island.



MAMMALS

Little-piked Whale

Baleenoptera acutorostrata

2

Two individuals were seen, one on 23 April at 30°49'N, 117°41'W, and another on 24 April at 29°30'N, 117°18'W. Both animals were adults. The sightings are believed to represent different animals as there were small distinctions noted in coloration of the two animals. They seemed to be attracted to the ship. During both periods of observation the large fathometer was working. This equipment emits a ping at frequent intervals, and I believe it possible that the animals were attracted to this. During both observation periods the ship was stopped or moving only slightly (holding against the current).

The observation of the animal on 23 April lasted for an hour. During this period the animal stayed around the bow of the ship, swimming back and forth. This animal was never noted to blow with a visible vapor cloud. Instead it began its exhalation below the surface of the water, finished it just as it surfaced, and inhaled while the blowhole was exposed. On this animal the broad white bands on the flippers were visible each time the animal surfaced and even when it was swimming several fathoms below the surface.

The animal observed on 24 April first appeared at the fantail of the ship where it surfaced only 10-15 meters off the port side. The animal was observed by most people on the ship. The animal surfaced in a rolling motion, forcing the pointed upper jaw out of the water, the forepart of the head then submerged exposing the blowhole; as the blowhole submerged and the roll was continued, the strongly recurved dorsal appeared and was above the water for several seconds. The animal never exposed the flukes during its play. It did make several passes by the ship, swimming on its back exposing the brilliant white underneath.

Baird (Common) Dolphin

Delphinus delphinus bairdii 158

This animal was seen frequently. The pods were not large, ranging from 2 to 35 animals with a mean of 9. They often came to the bow of the ship and rode the "wake" while the ship was underway at full speed. They would not stay with the ship if it was travelling at slow speeds.

Tursiops sp.

Tursiops were seen in the vicinity of Guadalupe Island where one was collected (see Guadalupe Island Report).

Otariidae

There were several sightings of eared seals, generally associated with floating kelp patches. One sighting of a pair of large sandy colored animals may have been Stellar Sea Lions (Eumetopias jubata) although these would have been far south of their normal range. On the San Benito Islands there is a light-colored race of California Sea Lion (Zalophus californiana). Since the observations of Dr. Hubbs and myself were short in duration, we discredited our initial identification of Eumatopias, and decided that the animals probably were migrant Zalophus from the San Benitos.



TABLE 1. Daily summary of birds and mammals observed at sea on EAC #11  
20-29 April and 4-5 May 1967

Species	April										May		TOTAL
	20	21	22	23	24	25	26	27	28	29	4	5	
Arctic Loon											14		14
Black-footed Albatross	1	4	3	2	-	-	-	-	2	4	-	-	16
Laysan Albatross	-	-	-	-	1	-	-	-	-	-	-	-	1
Shearwater/Petrel	5	-	1	-	-	1	-	-	-	-	-	-	7
Sooty Shearwater	1	2	1	2	1	-	-	-	-	-	-	-	7
Sooty/Slenderbill	-	1	-	-	-	-	-	-	-	-	-	4	5
Pink-footed Shearwater	-	1	-	-	-	-	-	-	-	-	-	-	1
Black-vented Shearwater	2	-	-	-	4	3	14	4	-	2500	-	-	2527
Black Petrel	2	-	-	-	1	-	-	-	-	3	-	3	9
Leach's Storm Petrel	-	-	-	-	-	-	-	-	-	3	-	2	5
Storm petrel sp.	2	2	-	2	-	1	-	-	-	-	-	-	7
Red-billed Tropicbird	-	-	-	-	1	-	-	-	-	-	-	-	1
Cormorant sp.	-	-	-	-	-	-	-	-	-	-	-	-	1
Shorebird sp.	-	14	1	-	-	-	-	-	-	-	-	-	15
Red Phalarope	49	9	100	28	17	18	-	-	34	-	83	-	338
Pomarine Jaeger	-	-	1	3	-	-	-	-	-	-	-	-	4
Glaucous-winged Gull	1	-	-	-	-	-	-	-	-	-	-	-	1
Western Gull	2	1	7	4	2	-	2	20	-	1	-	403	442
Sabine Gull	-	5	-	-	1	2	13	-	-	1	-	-	22
Gull sp.	8	-	-	-	-	-	-	-	-	-	5	-	13
Tern sp.	-	-	1	-	-	-	-	-	-	-	-	-	3
Xantus Murrelet	-	3	-	-	-	-	2	-	-	1	-	-	6
Bird sp.	2	1	1	-	1	1	-	-	-	-	-	-	6
TOTALS	75	43	116	41	31	26	31	24	36	2513	88	427	3451
Otariidae	-	-	3	-	-	-	-	-	-	-	-	1	4
Bairds Dolphin	15	42	62	-	15	-	-	-	-	20	1	3	158
Tursiops	-	-	-	-	-	-	12	10	-	-	-	-	22
Little Piked Whale	-	-	-	1	1	-	-	-	-	-	-	-	2
Whale sp.	-	-	-	-	-	-	1	-	-	-	-	-	1
Hours of Diurnal Observation	9.9	10.4	11.9	11.5	11.2	10.1	8.1	0.2	9.8	10.4	4.1	1.0	98.7
Hours of Nocturnal Observation					0.5								



TABLE 2. Summary of Temporal Bird Density, EAC #11  
April-May 1967

Species	Total Number	Birds/hr.
Arctic Loon	14	.014
Black-footed Albatross	16	.016
Laysan Albatross	1	.001
Pink-footed Shearwater	2	.002
Sooty Shearwater	7	.007
Black-vented Shearwater	2527	25.190
Black Petrel	9	.009
<u>Oceanodroma leucorhoa</u>	5	.005
Cormorant sp.	1	.001
Red-billed Tropicbird	1	.001
Pomarine Jaeger	4	.004
Glaucous-winged Gull	1	.001
Western Gull	442	4.420
Sabine Gull	22	.022
Tern sp.	3	.003
Red Phalarope	338	3.350
Xantus Murrelet	6	.006



## GUADALUPE ISLAND SURVEY

The Guadalupe Island portion of the cruise was concerned primarily with pinnipeds. The work on 26, 27 April was not planned but was substituted for pelagic work due to rough weather at sea.

The R/V Ellen B. Scripps provided logistic support for the Guadalupe Island survey work on May 1-4. Landings were made on the island from an outboard-powered skiff capably handled by Ron McConnaughey, Chief Technician on the Cruise. Many of the landings were made against rocks which would certainly have torn the skiff apart had it not been expertly handled. A rubber assault raft would be very satisfactory for these landings.

Black-vented Shearwater      Puffinus puffinus opisthomelas  
Estimated nesting pairs: 100  $\pm$  20%

This bird is breeding on Islote Negro, although the islet is small and the habitat not ideal for procellariid nesting. The soil is volcanic material, primarily scoria. Much of this material is loosely consolidated, making digging difficult. This species is a burrow nester. The burrows have narrow entrances (4 to 7 inches) and are generally shallow but long. Burrows were found up to 18 inches deep that then went four feet parallel to the surface. The egg is deposited at the extreme end of the burrow.

Most of the birds were on eggs during our visit. Of 43 burrows examined 70% of the birds were on fresh eggs. One bird was found on a pipped egg and a few moderately incubated eggs were found.

On this visit 23 birds were banded. Dr. Hubbs has banded this species on Islote Negro since 1963. In this time either one or two hundred birds have been banded, and six returns have been taken. Thus there is to date a 3 percent return rate on these bandings. As suggested by Dr. Hubbs, (Appendix II) "this strongly indicates the integrity of the breeding population." However, one evening off the south end of the island, a feeding flock of about 2500 Black-vented Shearwaters was encountered. A concentration such as this off a breeding island suggests that the birds may be island based. However, to our knowledge the birds breed only on Islote Negro. I recall seeing a specimen in the San Diego County Museum taken in breeding condition and possibly from a burrow from the outer islet off the south end of Guadalupe. This is a second possible current breeding area, but would these two small islets support the large number of feeding birds observed off the island? Dr. Hubbs suggest that these are nonbreeding birds from Isla Natividad, the main breeding island for this species, located 180 miles southeast of Guadalupe off Point Eugenia, Baja California. The possibility exists that there are many more birds based on these two small islands than we expect. All previous work has been done during the day and, as is the case with most procellariids, nocturnal populations are much higher than are diurnal ones. A small amount of night work during the breeding season will resolve this question.



Leach Storm Petrel      Oceanodroma leucorhoa

On 27 April we found only one large immature with down on the belly. This bird represents the last of the winter breeding race which has been called O. l. kaedingi. Later in the summer, a race thought to be O. l. soccoroensis breeds on the island. This temporal separation of the two races was first described by Hubbs (Systematic Ecology 9 (3 & 4) 134-147, 1960.) However, the subspecies O. l. kaedingi is not accepted by some taxonomists as a distinct race from soccoroensis. But the fact remains that there are at least two populations, if not races, breeding here in the same environment at different seasons.

During our visit to Islote Negro a Burrowing Owl (Speotyte comicularia) was flushed from the rocks and was seen flying around the island several times. Where the bird was originally sitting we found remains of several Oceanodroma. And as the survey continued many other Oceanodroma remains were found. The owl has done considerable damage to breeding storm petrels. One downy young was found partly eaten in the back end of a burrow. Did the owl go into that burrow and kill and eat the storm petrel there, leaving the remains? We found no indication of the owl having preyed on any of the other breeding birds.

Cassin's Auklet      Ptychoramphus aleutica      Estimated nesting pairs: 200 <sup>+</sup>

This little alcid is a burrow-nester on Islote Negro. They reportedly dig their own burrows. On Islote Negro the burrows were seldom more than six inches deep, but were up to four feet in length. In some areas the burrows are found among burrows of Black-vented Shearwaters and Xantus Murrelets. Fresh eggs, pipped eggs, and one large immature with traces of down were found.

We were using number three bands on these birds. The bands fit well on some birds, but on others they were too large and slipped off the tarsus. Was this tarsus size variance due to sex, age, or were we handling two different races of birds? There is a second subspecies, P. a. australis van Rossem, described from the San Benito and San Roque islands.

Xantus Murrelet      Endomychura hypoleuca      Estimated nesting pairs: 150 <sup>+</sup>

This attractive small alcid was nesting on Islote Negro. It nests in burrows and cavities in the rocks. Nests were found with one, two, and three eggs, but two seems to be the normal clutch size. There is considerable color variation in eggs from the same clutch. One clutch was found with one buffy egg and one olive-brown egg. There were also a few burrows that contained adults tending small downy young. Fifteen Xantus Murrelets were banded with Dr. Hubbs' bands on Islote Negro on 27 April.

On nights of 30 April, 2 and 3 May, Xantus Murrelets flew aboard the R/V Ellen B. Scripps. On these three nights 61 birds were banded, 25 of these with POBSP bands. Fifty-nine were banded aboard ship while anchored in Melpomine Cove, next to Outer Island where the birds breed, and two were banded in Northeast Bay. A breakdown of these birds follows:



New plumage W/brood patch	4
New plumage W/no brood patch	20
Old plumage W/no brood patch	30
Molting	4
Unknown	3
	<hr/> 61

Obviously most of these birds were not breeding.

While these birds were being banded a great amount of variance was noted in the distribution of black about the face and eye. Also there was variation in the coloration of the back, but this is attributed to the new plumage being darker. However, the variance in the face pattern was photographed for later comparison with skins. It is possible that this variance is normal, but may indicate mixing of populations of the two subspecies that are present in this area.

*Accipiter* sp.

On 2 May as we were concluding the Fur Seal survey along the east coast, a large accipiterine hawk was seen soaring over the cliffs several hundred feet above. The light was from the west so the bird presented only a silhouette. The size of the bird suggests that it may have been a Cooper Hawk, but the nature of the sighting does not constitute a record.

*Tringa* sp.

During the Fur Seal survey along the east coast of Guadalupe Island a "small" shorebird was flushed. At the time I noted the bent-winged flight of the bird and size. Again, the nature of this sighting would not constitute a record.

Wandering Tattler      *Heteroscelus incanum*

This shorebird was found in low density during the work on Guadalupe. They are found singly along stretches of rocky coastline. Dr. Hubbs states that they have been present on all visits at all seasons of the year.

Burrowing Owl      *Speotyto cunicularia*

The sighting of this bird is discussed under the account of *Oceanodroma leucorhoa* which is presently its prey species.

White-throated Swift      *Aeronautes saxatalis*

One bird was seen on Islote Negro on 27 April.

Anna Hummingbird      *Calypte anna*

This bird reportedly came with the recent introduction of the wild tobacco. This seems to be its primary food source. There is however an endemic tobacco on the island.



Rock Wren

Salpinctes obsoletus guadeloupensis

Several birds were seen on Islote Negro on 27 April. They are also common along the rocky coastline of Guadalupe Island.

House Finch

Carpodacus mexicanus

This bird is common locally along the coasts of Guadalupe Island.

Mammals

A paper now in preparation by Peterson, Hubbs, and others, summarizes and expands on work done during this trip as well as drawing from data collected previously. A few additional notes follow:

Mirounga angustirostris

During our work on this species on Guadalupe Island scars were noted. They are circular in shape and primarily occur on the back of the animal. They looked like gunshot wounds and we discussed this possibility, but as many of the scars are on the midline of the back it seemed probable that any bullet entering that portion of the body would hit the vertebrae and kill or cripple the animal. The cause of these scars was left undecided. Recently while working on the Hawaiian Monk Seal (Monachus schauinslandi) the same type of scar was noted on this species. K. C. Balcomb mentions in a preliminary report (P.O.B.S.P., Smithsonian Institution, Not published) that the scars are believed to be the result of wounds inflicted by bites of moray eels. That both animals spend much time in shallow water among rocks and coral (the haunts of the moray eel) respectively makes this a good possibility.

Delphinus delphinus bairdi

On 29 April a pod of about 20 common dolphin were seen associated with the feeding flock of 2500 Black-vented Shearwaters at the south end of Guadalupe Island.

Tursiops sp. (Pacific Bottle-nosed Dolphin)

Tursiops were seen off the east shore of Guadalupe on nearly every day of our stay. After two attempts had failed, on 3 May we finally collected a specimen. The animal was shot with buckshot from the Scripps and recovered with the skiff. This was the first known record of Tursiops in the area of Guadalupe Island. The animal was also thought to have both behavioral and morphological characteristics distinguishing it from Tursiops gilli found along the coast. Complete measurements were taken and the entire skeleton was roughed out and is now in the San Diego County Museum awaiting identification.

Ziphius cavirostris

Individuals of this species were seen along Guadalupe Island on two occasions during the survey. They have been recorded in this area previously.



FAc II

No Weather or posib sheets - data recorded on ADP Daily.

Possible entries on Sighting sheets not in zero of Daily log are

from McHubbs' running notes.



20 April 1967

Washington } EAC #11 28+  
Scrapps } 29-1

MV 67 I A-B

DE LONG, ROBERT L.

1967-IV, V

①

Time	Species	#	Dir.	Remarks
0515	S.R. Laysan Obs.			
0530	Gull sp. (large)	1	SW	imm bird - light bill/poor.
0545	Puffinus sp. <sup>puffinus</sup>	1	N	Centrating Dark back, light belly. Dark wings not seen. Low, on the water & fly Lt.
0550 FR	Western Gull	1	SW	following Ships Ad.
0555	Shear/Peto.	5+	SW	} Feeding over a school of feeding fish.
	Gulls sp.	2+	SW	
0602	Red Phalarope	1	SW	
0615	Puffinus sp. <sup>puffinus</sup>	1	W.	seen as above low flight with several flaps of glides. N. & easterly.
0615	S-W Gull	1	S	Ad.
0625	B-E Petrels	1	-	following - Arrived from Navy ship
0640	Gull sp.	2	SE	imm. Hutton Waters
0645	Red Phalarope	35±	SW	- seen bird with Nuptial class.
0705-0730	Breakfast			
0820	Gull sp.	1	S	Large: Adult.
0835	Black Petrel	1	S	Reliability of 3; low wing back.
0845				Re Hutton's sp. in a clump of <u>Neureya</u> etc. (is generally found only North of Point Conception.) Thus we have general direction of the current.
0900	Sooty Shearwater	1	N	White underwing seen well.
0910	Black Petrel	1	SW	- out on high Reliability of 3
0930	At all stop <sup>(have been in 20 min)</sup> working on beach. A Humpback trying to pick a 1000 meter crab			
0935	Western Gull	1	SW	
1040	Still at All Stop - close also temporarily.			
1330	Resume <del>the</del> obs. - The Deep dump is now being reb. (Deep <sup>1000 ft</sup> <del>dump</del> but not set)			
1430	Underway @ 160°			
1545				B-E Petrels - Apparently some bird
1550	Storm Petrel	2 ✓	SW	carries over 30-45 minutes.
1600	Bird sp sitting on Kelp bed	2		One definitely all black. Ad Brown headed grey or tan back as possible gull and even reminiscent of a Petrel.



Time	Observation	Count	Notes
1610	Shells on	1	mt Holt
1650	Shells sp.	1	inner
1700-1730	Surge - close obs.		
1730	Red Phalarope	1	W Identified by Coll.
1745	Phalarope sp.	2	W Red with a reliability of 2 or 3
1805-1812	Bairds (common) dolphin ✓	15 ± 3	Sgt Came to the ship - got no side from the 3 km west of the Working box.
1820	Phalarope	10 ± 3	W
1828	SS - clouds.		

90



21 April

(3)

Time	Species	n	Dir	Remarks
0600	Keep obs.			
0610	Western Gull	1	N	Two birds Adult plumage with a few dark feathers remaining on the tail.
0620	Pink sp.	1		
0650	Shearwater sp.	1	W	seen briefly swimming fast; only two came to the ship
0655-0700	Bairds Dolphin	20±5	E	
0700-0715	Birds			
0815	<del>Alcid</del> <sup>Yantis murrelet</sup> <del>Alcid</del> <sup>Alcid</sup>	2	SE	Small - birds. (Probably X on the Murrelet)
0845	BFA Albatross	1		An albatross, probably the same as yesterday's around this morning.
x 1000	BFA Albatross	3		When we stopped on the true vehicle the ex two birds appeared & fed on fish. Three dark winged birds & 1 light winged bird.
1025	Alcid <sup>Yantis murrelet</sup> <del>Alcid</del> <sup>Alcid</sup>	1	on H. H.	Probable Yantis murrelet
1100	Storm Petrel	2✓	SE	No White seen definitely but may have been present. Probable O. leucorhoa.
1115-1145	Lunch clouds.			
1145-1245	Hotel deep 1000 ft. Sch.			
1400	resume underway & obs.			
1420	Red Phalaropes	9	ON H. H.	One bird coming into musty plumage remainder were all grey.
1435	Bairds Dolphin	20	can't ship.	
1510	Sooty Shearwater	2	N	Large (California) fly in fish
1540	Bairds Dolphin	2	can't ship	
1645	small gulls ? <sup>Sooty</sup> <del>Small</del> <sup>Alcid</sup>	5		swimming high - dark looking edges giving No light on body below. Dark somewhat on head.
1645	Shearwater sp.	3		Flying fast by low
1646	Sooty Shearwater (5/6)	1	S	
1647	Shear pet. (Pink footed shear) <sup>Alcid</sup>	1	<sup>Probably Pink footed</sup>	Large, Brown back, patch behind eye white belly & chin, white underwings
1715-1735	close for Supper			
	Albatross about throughout day - (15)			

1735-1825 - Al ship - help with sets.



22 April 1967

Time	Species			
0512	Sun Rise			
0600	begin Obs.			
0601	Western Gull	1	SSW	Ad., first sub.
0605	"	1		Ad.
0615	Shear/Pet	1	NE	High arching, showed contrast of white on dark. Flight pattern suggested Sooty Shear, but bird is upwind and will lose more arching.
0620	Red Phalarope	1	SSW	
0625	"	4	on H/L	around floating kelp.
0650	Red Phalarope	5	Flying & sitting on H/L	
0655	Western gull	2	SSW	1 Ad; 1 imm
0700	Jaeger ( <del>Common</del> )	1	SSW	oversquall; Adult bird; <del>not</del> long wing L feathers.
0703	B-E Albatross	1		Following ship.
0715	Red Phalarope	1	SSW	
0725	Red Phalarope	15 ± 3	SSW	Several groups flying & landing.
0732	"	10 ±	SSW	Small groups 1, 2, 3's
0737	"	1	on H/L	
0740	"	6	SSW	
0743	Western gull	1	SSW	Ad.
0745	Red Phalarope	7	SW	
0800	(Have had considerable amount of) - Macrocyctis (the small kelp) floating in pods.			
0810	Red Phalarope	2	SSW	From on water.
0811	"	1	SSW	
0815	"	5	SSW	
0820	"	2	SSW	
0840	"	5	on H/L	two individual plunge
0855	Red Phalarope	3	on H/L	beside large patch of Macrocyctis
0910	"	10	SSW	Small group.
0911	"	2	on H/L	Individual plunger; free dangle jelly fish on water surface.
0922				Large Sunfish. (fish) Brown & tan



22 April

(5)

Time	Species	#	Dir	Remarks
0930	Birds (common) D. L. W.	7	E → W	Came to bow but passed on.
0945	"	5	W	"
0950				B.F.A. Total of 2
0950	Red Phalarope	2	E	
0952	Bairds Pol. L. W.	1		
1015	Red Phalarope	1	E	Nuptial plumage
1045	Western gull	1	SW	Adult.
1046-1115	hunting & meal.			
1115-1135	Lunch.			
1150	Western gull	1 ±		Total of Adults.
1255	Phalarope (Red)	3	SW	
1310	Bird sp.	1		
1355				Large (C. californica) flying fast off bow
1356	<u>Delphinus</u>	35 ± 5		mixed pod of Delphinus & <del>Delphinus</del> <del>stagnans</del> . The animals were not mixed randomly but rather there were two flocks of the two species travelling together. Passed the ship from east to west.
1401	Red Phalarope	4	SW	
1420				Naucrypta
1432	Pomarine jaeger	1	SW	Adult; fine turned but yellow.
1445	Shearwater sp.	1		No id.
1451	Bairds Pol. L. W.	7		Came to bow.
1508	Tern sp.	1	N	Small sized; grey mantle, light belly, dark cap.
1538	Red Phalarope	2	W	
1545				Mixed pod of Delphinus, Delphinus 35 ± 5 <del>stagnans</del> , 2 possible 5 females
1600	Red Phalaropes	3	S	
1601	Sooty Shearwater	1	SW	
1609				Seen first - 2-3 ft. diameter
1615	Red Phalarope	5	SW	- on water.

All were Delphinus! 35 ± 5  
mistakenly considered white on the dorsal  
of Delphinus for the distinction  
making on larger animals.



1620	B-F Albatrus	1	SN	total 43 one with Band
1650	N. Fur Seal <small>Recorded on AOPas Otariidae only</small>	1	<del>SN</del>	around Microcystis led. Pinel around young. are no longer seen of this S.D. RLD 5 May 1967
1715-1735	Primer			
1740				sun fish 3-3 1/2 ft 0'
1800	Baird's Dolphin	6		Phy is around Bow.
1820	S.S. Close obs.			
1830	Sooty Shear. & Pomarine Jaeger			seen by Bob Wines
				Not included in diurnal obs. (after sunset.)
		117 ##		



23 April

Time	Species	#	Dir.	Remarks
0545	Begin obs.			
0545	Western gull	1	SW	Adult.
0600	Red Phalarope	3	SW	
0608	"	10	N	
0612	Western Gull	1	SW	- total 2 Adults
0655	B-F Albatross	1	SW	- one following
0710	B-F A.	1		2 following - now on free deck
0715	Pomarine Jaeger	1	around ship	ret-ating fish
0740				underway 090° @ 10 Km. (changed 10 min later.)
0810	Red Phalarope	1		
0810				The jaeger is still about.
0833				fly fish
0834				"
0838	Red Phalarope	1	SW	Northern plumage. Flying high & out to the north. Is he rising early?
0900	Western gull			
0900	Mammals.			Came upon a floating raft of <i>Macrocystis</i> that was about 15 x 25 ft. Along side this there were two mammals. I believe they were Steller Sea Lions. If so it represents a southern extension for the species. Will return to attempt collecting one of the animals.
1010				Have been stopped for past 10 min & had free variable set. Now underway at 000° @ 10 Km. Subject free variable
1030	Pomarine Jaeger	2	on deck	Ads. around free variable set.
1045				underway to water bridge
1100				Flying fish 6. (cat-horsehead)
1135-1155	Lunch close dis.			
1155				off Anchor buoy - will pull.

Possible Bristle  
Tubipores which always  
were very light  
colored  
Collected only  
at 1010  
R. G. O.  
5 min



1215				floating <i>Pelagophycus</i> - well decomposed
1230	Western gull.	1	SSW	Ad (hauling 2000 meters) (Sah.)
<del>1415</del>				
1230-1500				Hauling Anchored 2000 m. V. S. S. S.
1500	Red Phalarope	5	SSW	
1515	Red Phalarope	1		on floaty <i>Monocystis</i>
1345-1445				Little piked whale - Stayed at observation for about a hour. The whale on the pectorals was very well defined. got photos.
1550	Sooty Shearwater	2	on Hott	Nice <sup>white</sup> underwings
1600-1620	Abandon Ship Bill			
1630	Red Phalarope	1	E	Not in normal plumage.
1643	"	2	W	
1650	"	1	SW	Flying high - Normal plumage.
1700	"	1	on Hott	
1710	"	2	"	INormal; 1 winter plumage
1712				flying fish (c. californicus)
1715-1745	Dinner			one group of whales seen during this time
1753	Storm Pet sp. ✓	1	NW	Not well seen - way out.
1754				Flying fish (c. californicus)
1806				Flying fish (c. californicus)
1818				"
1813	Storm Petrel ✓	1	SSW	light feeding, but flight like <i>Oceanodroma</i>
		up		



24 April 1967

(9)

Time	Species	#	Dir	Rem
0600	begin obs P.P. opisthomela			
0600	Many Shearwater	1	E	S.R.
0621	"	1	E	
0740	St. on Pet	1	W	All Black - flight noted with no dusky wing
0745	Bairds Dolphin	(15)		come to bow then departed to East.
0800				change course from 320 to 140 @ 3 knots. For other tunnel.
0905	Western Gull	1	SE	Ad.
0945	"	1		Ad - Ragged primaries on left wing
1030	Tern sp.	2	SE	
1035	Sooty Shearwater	1	NE	
1050	Gull (Sabine) Rel 3	1	NE	
1220	Bird sp	1	SE	- white - very out
1305	Red Phalarope	3	SE	
1308	Red Phalarope	1	N/H	H feeding
1320	"	1	N/H	
1325	"	5	W	
1350	Little Piked Whale	(1)	along side.	surfaced 10' to port of funnel - looking very close. white whiskers on flukes & divided on lateral position body
1451	Red Phalarope	1	W	Ship at starboard
1530-1645				Close obs - making dark red
1530	Red-billed tropic bird	1	SW	Flies around ship for some time
1700	Red Phalarope	3	N	
1715	"	1	N	
1725	"	2	SE	
1730	P. puffinus opisthomela	2	W	Black water
1821	SS			
1830	Tropic bird	1	N	Way out on horizon possibly mistaken for counted
		31		







26 April 1967

Time	Species	#	Dir	Rem.
05				
0550	Begin obs.			off Mendocino Isl.
10555	P. puffinus opisthomerus	2	SW	
10606 <sup>FF</sup>	P. puffinus	8±2		Feeding
10628	Xantho maculata	~		on Hott
0700	Sooty Gull	11	N	a string that appear to be migrating;
0718	P. puffinus	1	SD	They are moving past Mendocino about 3
0730	"	1		miles off shore
0750	Western gull	2		following - Pink foot form.
0900	Sooty Gull	2	N	about 2 miles from shore
1000	P. puffinus	2		10 regulars winter about. Dec on the opposite side from the feeding grounds.
1145-1215	Dismiss			
1345	<u>Dolichopus</u>	12±4		<u>Petrel Tarsiers</u> .

Rest of day spent on Mendocino Isl.

27 April 1967

1800	even obs after working on Sooty Gulls today. Off E side of Mendocino			
1800	Western gulls	20+		feeding & returning to island
1800	P. puffinus	4		returning to island.
1808	Tarsiers -	8-10	on Beach.	

27 April - Mendocino Isl.



28 A mit 1000

28 April 1967				
Time	Species	#	Dir	Remarks
0545	Bay's obs.			
0555	BFA 1 bat.	1		for study
0932	Black Petrel	1		
1105	Red Phalarope	9	N	all new full plumage
1115	"	15	N	
Dinner; 1120-1200				
3 1300-1500				
1520	R Phalaropes	10		
1650	BFA	1		Total of 2



29 April 1967

(13)

0600	Regin Obs.				begin <del>laying</del> laying to
0601	B F B / b. Lms	1			
0620	"	1			Total of two
0700	"	2			" of 4 (followed to 3 miles of Henderson Is)
0712	O. L. (scurvian)?	1			SW all black.
0825	P. puffinus opisthomelas	1	W		& Black-Rumped form.
1005	Sooty Pet <sup>also</sup>	1	✓		— All black & Skull
1028	Storm Petrel <sup>Probably</sup> <sub>O.L. scurvian</sub>	1	✓	SW	Black-rumped - lightning crests
1120	Sabine Gull	1		N	
1234	Xanthus maculatus	1		on rock	
1615	P. p. opisthomelas	2000-2000			feeding - off So. E corner of Henderson.
1620	Delphinus <sup>caudatus</sup> <del>caudatus</del>	2:14			

30 April — 0800 4 May 1967  
Henderson Island.



4 May 1967

1100	begin obs 6 miles north of Guadalupe Is.			
1130	close for Dinner			
1430	took time to flesh out <u>turkeys</u> .			
1450	Gulls.	4	NW	Probably Sabine. (flying low over water - fast)
1501	Red P Laysan	8	NW	
1502	"	10	N	
1510	"	3	NW	
1511	"	15	"	
1512	"	12	"	
1513	"	25	"	flying very high - up to 100 ft.
1530	Porpoise	6	?	1/2 mile off the bow.
1551				flying fish. large.
1600	Red P Laysan	6	N	
1610	"	1	NW	
1652	"	3	NW	
1700-1800	Dinner			
1815	Gull	1	N	Low M.H. probably a Sabine in migration
1855	Porpoise	1	NW	- <u>Delphinus</u> <sup>rel</sup> <u>or</u> <u>Laysan</u>



5 m aug

0700				off Coronados - North, middle island.
0710	Western gulls	400 ±		off North pt. of N. Coronado Is.
0715	Coronados	1	SW	Circling fishing vessels
0730	Zelophus	1		Bull.
0740	Loon (G. Arctic)	13	NW	Possible <sup>arctic</sup> <del>little</del>
0750	Shear/pet	1	NW	Large - Black but, & head - under parts not seen - flight like P. Is. - <del>Arctic</del> Shear
0720				

just north of N. Is. of Coronados there was a temporary concentration of Jells. Perhaps 10 to 15 sq ft.

0832 close & north of Harbor.

0620	<u>Leucodiscus melanurus</u>	3		
0625	Sooty/Sib.	4		
0625	Oceanodroma l.	2		little or no white
0625	Larus occidentalis	1		
0629	Novia	1	NW	possible <u>arctic</u>
0632	Larus occ.	1		
0650	Delphinus	3+		came to ship
0703	Larus occ.	1	S	

Observations from 0620 to 0703 are from E. L. Anderson.



Thomas Whankington

Log

# RECORD

20 April - <sup>29 April</sup> ~~5 May~~

1967

Ellen B. Scripps

30 April - 5 May 1967



Pacific Program  
Smithsonian Inst.  
Washington, D.C.

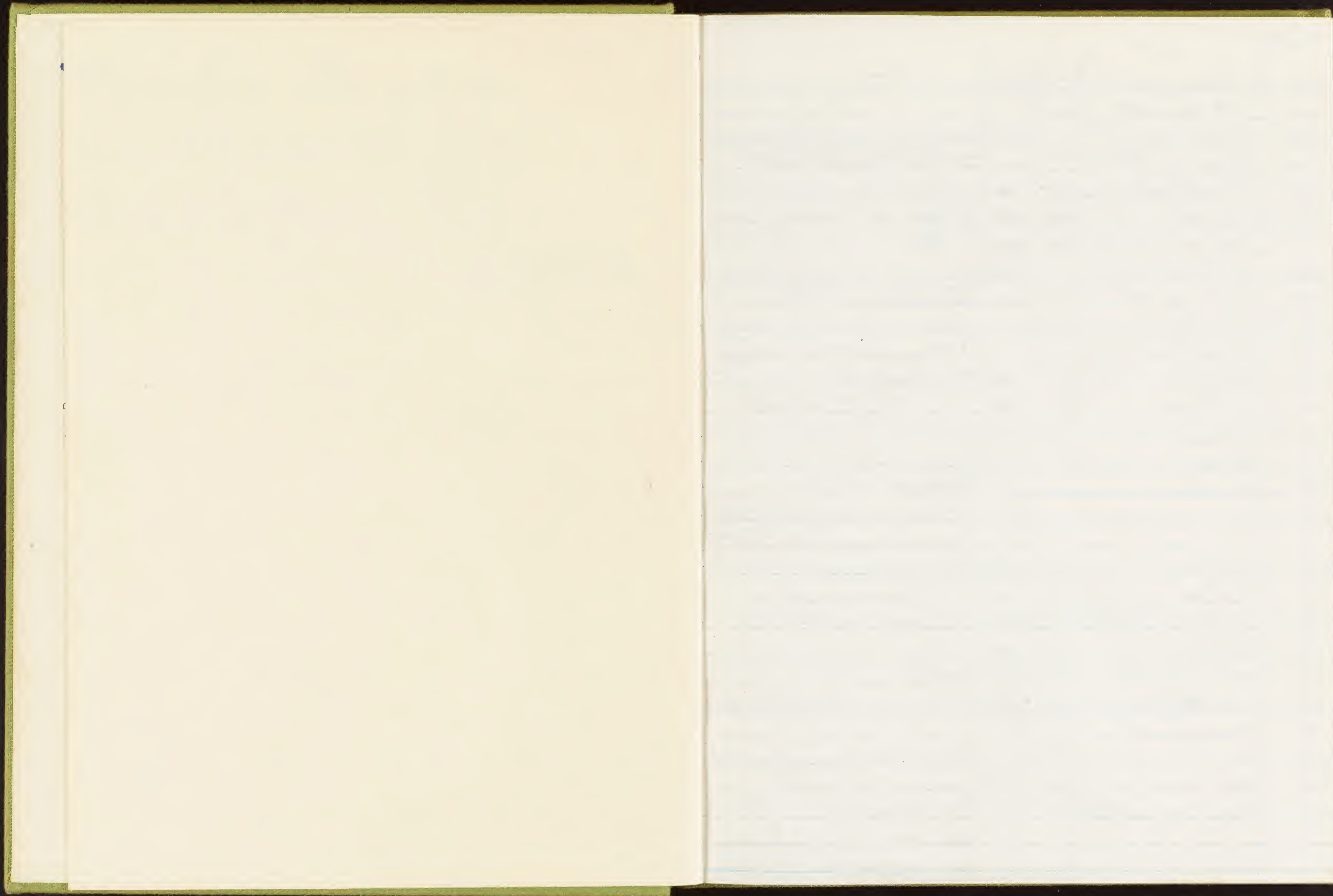
20560

Robert L. Dalry P.O.B.S.P. observer.

Cruise: Scripps Institute of Oceanography, Thomas Washington.

Under Direction of Dr. C. L. Hubbs.







20 April 1967

N N

Time	Species	#	Dir.	Remarks
0515	S.R. Laysan obs.			
0530	Mull sp. (large)	1	SW	imm bird - light bill/poor.
0545	Puffinus sp. <del>puffinus</del>	1	N	Contrasting dark back, light belly, underwings not seen. Low, on the water & fly ht.
0550	Western Gull	1	SW	following ship
0555	Shear/Petrel	5+	SW	} Feeds over a school of feeding fish.
	Mull sp.	2+	SW	
0602	Red Phalarope	1	SW	seen as above 1 on slight with several flaps of glides. N & away.
0615	Puffinus sp. <del>puffinus</del>	1	W	
0615	H-W Gull	1	S	nd.
0625	B-F Petrel	1	-	following - arrived from Navy above
0640	Mull sp.	2	SE	imm. Haysan War tern
0645	Red Phalarope	35±5	SW	- seen bird with Nuptial colors.
0705-0730	Breakfast			
0820	Mull sp.	1	S	Large: Adult
0835	Black Petrel	1	S	Reliability of 3; home wing back.
0845				Re Haysan spotted a clump of Mercury etc. (is generally found only N. of the point compass etc.)
				Thus we have general direction of the area.
0900	Sooty Shearwater	1	N	While underwing seen with.
0910	Black Petrel	1	SW	- out on wings Reliability of 3
0930	At all stop working on beach. A Haysan trying to pick a 1000 <sup>rather</sup> <del>under</del> <sup>can</sup>			
0935	Western Gull	1	SW	
1040	Still at All Stop - close obs. temporarily.			
1330	Resume obs. - The Deep Group is now being set. (Deep (1000 F.) but not set)			
1430	Underway @ 160°			
1545	B-F Petrel - Apparently some bird			
1550	Storm Petrel	2	on 1/4	compos even 80-15 minutes.
1600	Bird sp. sitting on Kelp bed	2		One definitely all black. Ad. Brown headed grey on the back a possible gull and even reminiscent of a Pintail.

1610

Mull sp.

1

on 1/4

Adult. Cd, 1 hour, 10 min, or 15-20 min.

1650

Mull sp.

1

imm

1700-1730

Sunset - clouds.

1730

Red Phalarope

1

W

Identified by call.

1745

Phalarope sp.

2

W

Red with a reliability of 2 or 3

1805-1812

Baird's (common) dolphin

15±3

SW

Came to the ship - got no side from the 3 km end of the working box.

1820

Phalarope

10±3

W

1828

SS - clouds.


90



21 April

Time	Species	#	Dir	Remarks
0600	begin obs.			
0610	Western Gull	1	N	Two birds Adult plumage with a few dark feathers remaining on the tail.
0620	Risker	1		
0650	Shorebird sp.	1	W	seen briefly swimming; only two come to the ship
0655-0705	Bairds Dolphin	20±5	E	
0700-0715	Breakfast			
0815	<del>Alcid</del> <sup>Jaeger</sup> <del>Alcid</del> <sup>murrelet</sup> <del>Alcid</del> <sup>Rel 3</sup>	2	SE	Small - birds. (Puffin x or other Murrelet)
0845	B-F Albatross	1		As albatross, possibly the same as yesterday's around this morning.
x 1000	BFA Albatross	3		When we stopped on the five vehicle set the sp. two birds appeared & fed on fish. Three dark winged birds & 1 light winged bird.
1025	Alcid <sup>Jaeger</sup> <del>Alcid</del> <sup>Rel 3</sup>	1	on H/H	Possible Xantus murrelet
1100	Storm Petrel	2	SE	No white seen definitely but may have been present. <sup>Possible O. leucorhoa.</sup>
1115-1145	Lunch clouds.			
1145-1145	halibut deep 1000 ft. set.			
1400	resume anturary & obs.			
1420	Red Phalarope	9	on H/H	One bird coming into nuptial plumage. remainder were all grey.
1435	Bairds Dolphin	20	comb ship.	
1510	Sooty Shearwater	2	N	Large (Colaptes) fly in bird
1540	Bairds Dolphin	2	comb ship	
1645	small gulls ? <sup>Sooty</sup> <del>Alcid</del> <sup>Rel 3</sup>	5		swimming high - dark bodies, edges of wing No light on body below. Dark somewhere on head.
1645	Shorebird sp.	3		Flying fast by low
1646	Sooty Shearwater (S/B)	1	5	
1647	Shear pet. (Pink footed shear) <sup>Rel 3</sup>	1	<div>Possible Pink footed</div>	Large, Brown back, patch behind eye white belly & chin, white underwings.
1715-1735	close for Supper			
Albatross about throughout day. (13)				

22 April 1967

Time	Species	#	Dir	Remarks
0512	Sun Rise			
0600	begin Obs.			
0601	Western Gull	1	SE	Ad., Pink feet.
0605	"	1		Ad.
0615	Shear/Pet	1	NE	High arching, showed contrast of white on dark. Flight pattern suggested Sooty Shear, but bird is up white and will look more arching.
0620	Red Phalarope	1	SW	around floating kelp.
0625	"	4	on H/H	Flying & sitting on H/H.
0650	Red Phalarope	5		
0655	Western gull	2	SE	1 Ad; 1 imm
0705	Jaeger ( <del>Jaeger</del> ) <sup>Rel 3</sup>	1	SW	overspall; Adult bird; <del>not</del> long wing L. feathers.
0703	B-F Albatross	1		Following ship.
0715	Red Phalarope	1	SW	
0725	Red Phalarope	15±3	SW	Several groups flying & landing.
0732	"	10±	SW	Small groups 1's, 2's, 3's
0737	"	1	on H/H	
0740	"	6	SW	
0743	Western gull	1	SW	Ad.
0745	Red Phalarope	7	SW	
0800	(Have had considerable amount of)			
0810	Red Phalarope	2	SW	From on water.
0811	"	1	SW	
0815	"	5	SW	
0820	"	2	SW	
0840	"	5	on H/H	two in nuptial plumage
0855	Red Phalarope	3	on H/H	beside large patch of Macrocytis
0910	"	10	SW	Small groups.
0911	"	2	on H/H	Nuptial plumage; free domain jelly fish on surface.
0922				Large Sunbird.  Brown & tan



22 April

Time	Species	#	Dir	Remarks
0930	Birds (common) D. & L. sp.	7	E & W	Came to bow but passed on.
0940	"	5	W	"
0950	Red Phalarope	2	E	BFA. Total of 2
0952	Birds D. & L. sp.	1		
1015	Red Phalarope	1	E	Nocturnal plumage
1045	Western Gull	1	SW	Adult.
1046-1115	hunting ground.			
1115-1135	Lunch.			
1150	Western gull	1 ±		Total of Adults.
1255	Phalarope (Red)	3	SW	
1310	Bird sp.	1		
1355				Large (C. californicus) flying fast - off bow
1356	<u>P. californicus</u>	35 ± 5		<del>Mixed</del> pod of Delphinus <del>off bow</del> <del>shy</del> . The animals were not mixed randomly but rather there were two flocks of the two species travelling together. Passed the ship from east to west.
1401	Red Phalarope	4	SW	
1420				Naucoryctes
1432	Pomarine jaeger	1	SW	Adult; fine turned tail feathers.
1445	Shearwater sp.	1		- No id.
1457	Birds D. & L. sp.	7		Came to bow.
1508	Tern sp.	1	N	Small size; grey mantle, light belly, dark cap.
1538	Red Phalarope	2	W	
1545				Mixed pod of Delphinus, Delphinus 35 ± 5 <del>Large</del> , 2 possible S. f. sp.
1600	Red Phalaropes	3	S	
1601	Sooty Shearwater	1	SW	
1608				Sea birds - 2-3 ft in diameter
1615	Red Phalarope	5	SW	- on water.

All were Delphinus. 2  
mistakenly recorded as on the dorsal  
of Delphinus for the distinctive  
marking on the back.

1620	B.F. Albatross	1	SW	Total of 3 one with Band
1650	N. Fur Seal	1	SW	around M. californicus. Point out young. as no longer seen of this S.D. 210 5 May 1967
1715-1735	Primer			
1740				Sea fish 3-3 1/2 ft 0'
1800	Birds D. & L. sp.	6		Phy in around Bow.
1820	S.S. Close obs.			
1830	Sooty Shear. & Pomarine jaeger			seen by Bob Weiner

Not included in diurnal obs. (after sunset.)

117  
++



23 April

Time	Species	#	Dir.	Remarks
0545	Begin obs.			
0545	Western gull	1	SE	Adult.
0600	Red Phalarope	3	SE	
0608	"	10	N	
0612	Western Gull	1	SE	- total 2 Adults
0655	B-F Albatross	1	SE	- one following
0710	B-F A.	1		2 following - now on free school
0715	Pomarine Jaeger	1	and SE	ret-ating fish
0740				underway 090° @ 10 Km. (changed 10 min later)
0810	Red Phalarope	1		
0810				The jaeger is still about.
0833				flying fish
0834				"
0838	Red Phalarope	1	SE	Natural Plume. Flying high and to the north. Do he may riding?
0900	Western gull			
0900	Mammals.			Came upon a floating raft of Macrocytis that was about 15 x 25 ft. A long side this there were two mammals. I believe they were Stellar Sea Lions. If so it represents a southern extension for the species. Will return to attempt collecting one of the animals.
1010				Have been stopped for past 10 min & had free recall set. Now underway at 000° @ 10 Km. Subst free recall
1030	Pomarine Jaeger	2	on SE	Ads. around free recall set.
1045				underway to when buoy
1106				Flying fish (californianus)
1135-1155	Lunch close obs.			
1155				off Anchor buoy - will pull.

Possible Bigg's Seal pup which may be collected at 1010. Red 3 min

1215				Floating Pelagophytes - well decomposed
1230	Western gull.	1	SE	Ad (hauling 2000 meters)
1230-1500				Hauling Anchor 2000 m. V. set.
1500	Red Phalarope	5	SE	
1515	Red Phalarope	1		on floaty Macrocytis
1345-1445				Little piked whale - Stayed about ship for about a hour. The whale on the pectorals was very well defined. got photos.
1550	Sooty Shearwater	2	on Hott	Nice white underwings
1600-1620	Abandon Ship Bill			
1630	Red Phalarope	1	E	Not in normal plumage.
1643	"	2	W	
1650	"	1	SW	Flying high - Normal plumage.
1700	"	1	on Hott	
1710	"	2	"	1 Normal; 1 winter plumage
1712				flying fish (californianus)
1715-1745	Dinner			one group of whales seen during this time
1753	Storm Pet sp.	1	NW	Not well seen - wing out.
1754				Flying fish (c. californianus)
1806				Flying fish (c. californianus)
1818				"
1813	Storm Petrel	1	SE	light fluffing, but flight like Oceanodroma



24 April 1967

Time	Species	#	Dir	Remarks
0600	begin obs			
0600	Many S shearwaters	1	E	S.R.
0621	"	1	E	
07040	Storm Pet	1	W	All Black - possible black tail. (lighter head with no dusky wings)
0745	Bairds Dolphin	(15)		Came to bow then departed to East.
0800				Change course from 320 to 140 @ 3 Km. For other tunnel.
0905	Western Gull	1	SW	Ad.
0945	"	1		Ad - Ruygeest primaries on left wing
1030	Tan sp.	2	SW	
1035	Sooty Shearwater	1	NE	
1050	Gull (Suline) Rel 3	1	NE	
1220	Bird sp	1	SW	- white - winged.
1305	Red Phalarope	3	SW	
1308	Red Phalarope	1	N/E	H. feeding
1320	"	1	N/E	
1325	"	5	W	
1350	Little Piked Whale	(1)	along side.	surfaced 10' to port of funnel - looking very dark, white whiskers on flippers & breasted on lateral position body
1451	Red Phalarope	1	W	Ship at stand still
1530-1645				Close obs - making dark red
1530	Red-billed & regis bird	1	SW	Flew around ship for some time
1700	Red Phalarope	3	N	
1715	"	1	N	
1725	"	2	SW	
1730	P. puffinus opisthomela	2	W	Black dated 8
1821	SS			
1830	Tropic bird	1	N	Way out on horizon possibly mistaken for Counted
		31		

25 April 1967

Time	Species	#	Dir	Remarks
0545	Begin Obs.			
0800				fly in first
0950	Red Phalarope	5	NW	
1055	White sp.	1	SE	Small animal.
1140-1210				Lunch (on station)
1225	Red Phalarope	1		
1230	"	2		
1240	Storm Pet	1		
1253	Red Phalarope	2		
1258	P. puffinus opisthomela	1	W	
1400	Shear/Pet	1	SW	high Arching - possible Sooty Shear. too great distance
1455	Suline Gull - Seen with	1	on Hook	near board. No black tail border.
1457	Red Phalarope.	2		
1508	"	5		
1509	Suline gull	1		Ad. No black tail but black wing tips and also young 1 on water.
1625	Bird sp.	1		
1641	Puffinus puffinus opisthomela	2	W	
1645	Red Phalarope	1	SW	
1650				Turtle (writhing) (Lipoforn)
				20 I. equidens - long A r I



26 April 1967

Time	Species	#	Dir	Rem
05				
0550	Begin obs.			off Mendocino Isl.
0555	P. puffinus <i>opisthomerus</i>	2	SW	
0605	P. puffinus	8±2		Feeding
0628	Xantho mordax	2		on rock
0700	Sabine gull	11	N	a string that appear to be migrating;
0718	P. puffinus	1	SE	They are moving past Mendocino about 3
0730	"	1		miles off shore
0750	Vesper gull	2		following - pink feet form.
0900	Sabine gull	2	N	about 2 miles from shore
1000	P. puffinus	2		10 regular waves about. Waves on the opposite side from the feeding grounds.
1145-1215	Dinner			
1345	Salmon	12±4		Feeding to salmon

Rest of day spent on Mendocino Isl.

27 April 1967

1800	even obs of looking on island region today. Off E side of Mendocino			
1800	Water gulls	20+		feeding & returning to roost
1800	P. puffinus	4		returning to roost
1808	Tursiops	8-10	on Beach	

27 April - Mendocino Isl.

28 April 1967

Time	Species	#	Dir	Rem
0545	Bay C obs.			
0555	BFA 1 bat.	1		for cloudy
0932	Black Petrel	1		
1105	Red Phalarope	9	N	all New feed plumes
1115	"	15	N	
1120-1200	Dinner			
1300-1500				
1520	R Phalaropes	10		
1650	BFA	1		Total 2

30 April - 0800-1200 - King AOE  
Mendocino Island



29 April 1967

0600	Regia obs.			
0601	BFA/batwa	1		
0620	"	1		
0700	"	2		
0712	O. l. (saurerensis)?	1		
0825	P. ruffinus opisthomelas	1	W	
1005	S. from Pet	1		
1028	Stann Petrel <sup>possibly</sup> <sub>ol. saururus</sub> <sub>rel 3.</sub>	1	SW	
1120	Sabine Gull	1	N	
1234	Xanthus maculatus	1	on rock	
1615	P. p. opisthomelas	2000-2000		feeding - off So. E corner of
1620	Delphinus <sup>caudatus</sup> <del>caudatus</del>	2:14		Shadblow.

30 April - 0800 4 May 1967  
Shadblow Island.

4 May 1967

1100	begin obs 6 miles north of Shadblow Isl.			
1130	close for Dinner			
1430	took time to flesh out <u>turkeys</u> .			
1450	Gulls.	4	NW	Probably Sabine. (flying low over water - fast)
1501	Red P. Ledge	8	NW	
1502	"	10	N	
1510	"	3	NW	
1511	"	15	"	
1512	"	12	"	
1513	"	25	"	flying very high - up to 100 ft
1530	Porpoise	6	?	1/2 mile off the bow.
1551				flying fish. Large.
1600	Red P. Ledge	6	N	
1610	"	1	NW	
1652	"	3	NW	
1700-1800	Dinner			
1815	Shad	1	N	200 M. H. old probably a Sabine in migration
1855	Porpoise	1	NW	- <u>Delphinus</u> <sup>rel 3</sup> <u>caudatus</u> <u>Laysan</u>



5 May

0700				off Coronados - North, middle, E. end.
0710	Western gull	400 ±		off North pt. of N. Coronado Is.
0715	Coronados	1	SW	Circling fishing vessels
0730	Zelophus	1		Bull.
0740	Loon	13	NW	Possible <sup>again</sup> <del>at the</del>
0750	Shear/pet	1	NW	Large - Black bull, E. end - under rocks not seen - flight like Purple. <del>feeding</del> <sup>seen</sup>
0720				

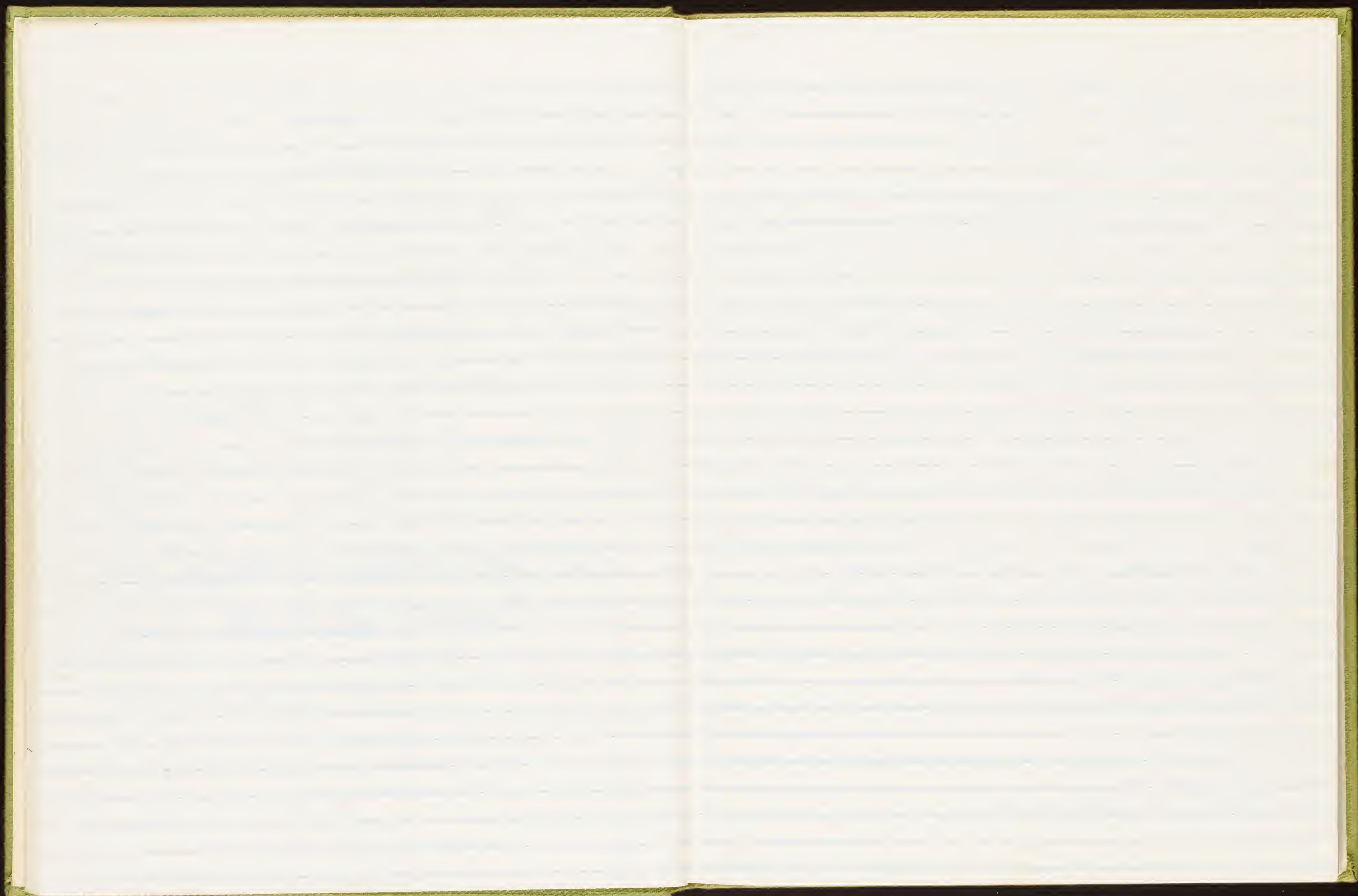
just north of N. Is. of  
Coronados there was a terrific  
concentrating Jella. Perhaps  
10-12 sq ft.

0832 close & north of Harbor.

0620	Lomdia <u>melanura</u>	3		
0625	Sooty/Sib.	4		
0625	Oceanodroma l.	2		little or no white
0625	Larus occidentalis	1		
0629	Harris	1	NW	possible <u>arctica</u>
0632	Larus occ.	1		
0650	Dolphin	3+		came to ship
0703	Larus occ.	1	S	

Observations from 0620 to 0703 are from E. L. Hines.









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A.H. Harvey:

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50¢/in





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